

CLAIMS

What is claimed and desired to be covered by Letters Patent is:

1. A conduit marking scribe comprising:
 - a) a body element which includes
 - (1) a first end,
 - (2) a second end,
 - (3) a longitudinal axis extending between the first end of said body element and the second end of said body element,
 - (4) a first side,
 - (5) a second side,
 - (6) a transverse axis extending between the first side of said body element and the second side of said body element,
 - (7) a first surface,
 - (8) a second surface,
 - (9) a thickness dimension extending between the first surface of said body element and the second surface of said body element, and
 - (10) a slot defined in said body element and extending from adjacent to the first end of said body element to adjacent to the second

end of said body element and extending from the first surface of said body element to the second surface of said body element;

b) a pivot unit on the second end of said body element, said pivot unit being adapted to contact and move along the outer surface of a first conduit which will be engaged with a second conduit after the second conduit has been cut to accommodate the first conduit, said pivot unit including

(1) a mounting ear on the second end of said body element,

(2) a wheel rotatably mounted on the ear to rotate in a plane containing the transverse axis of said body element, the wheel having an outer circumference and rotating on the mounting ear clockwise and counterclockwise with respect to the first and second sides of said body element,

(3) knurling on the outer circumference of the wheel, and

(4) a center hole defined through the wheel and through the mounting ear; and

c) a scribe unit movably mounted on said body

element, said scribe unit including

- (1) a frame having a first surface and a second surface and a thickness dimension that extends in the direction of the thickness dimension of said body element when the first surface of the frame is positioned to abut the second surface of said body element, the frame having a hole defined therethrough with the hole being oriented to extend in the direction of the thickness dimension of said body element when the first surface of the frame is in contact with the second surface of said body element,
- (2) a counterbore defined in the second surface of the frame adjacent to the hole defined through the frame,
- (3) a bored bolt including
 - (A) a head end located in the counterbore defined in the second surface of the frame when the bored bolt is in place on the frame,
 - (B) a bolt body which extends from the head of the bored bolt through the hole defined through the frame to extend

- through the slot defined in said body element when said scribe unit is in place mounted on said body element,
- (C) a second end,
 - (D) an outer surface on the bored bolt body,
 - (E) a bore defined in the bored bolt body and which extends from the head of the bored bolt to the second end of the bored bolt, the bored bolt having an inner surface located adjacent to the bore defined in the bored bolt body, and
 - (F) a screw thread defined in the outer surface of the bored bolt body,
- (4) an annular washer having a first surface and a second surface, the second surface of the annular washer being located to contact the first surface of the frame when the annular washer is in place on the frame, the annular washer having a hole defined therethrough, the hole defined through the annular washer extending from the first surface of the washer to the second surface of the washer and is aligned with the hole defined through the frame when the washer is in place,

(5) an annular nut having a first surface and a second surface, the second surface of the annular nut contacting the first surface of the annular washer when the washer and the nut are in place, the nut having a hole defined therethrough from the first surface of the nut to the second surface of the nut, the hole defined through the nut being aligned with the hole defined through the washer and with the hole defined through the frame when the nut and the washer are in place on the frame, the nut having a screw thread defined thereon adjacent to the hole defined through the nut, the screw thread on the nut threadably engaging the screw thread on the bored bolt when the bored bolt and the nut are in place on the frame,

(6) a bored knob, the bored knob including

(A) a body,

(B) a first end on the body of the knob,

(C) a second end on the body of the knob, the

first end of the bored knob being spaced

apart from the first surface of the nut

to define a gap between the bored knob

and the nut when the knob and the nut are in place on the bored bolt, said body element being interposed between the nut and the knob when said scribe unit is in place on said body element with the first surface of said body element in contact with the first end of the knob and the second surface of said body element in contact with the first surface of the nut whereby said scribe unit is held in place on said body element through frictional engagement with said body element,

(D) a blind-ended bore defined in the bored knob, the blind-ended bore extending from the first end of the knob toward the second end of the knob, the blind-ended bore being aligned with the hole defined through the nut when the knob and the nut are in place on the bored bolt, and

(E) a screw thread defined on the bored knob adjacent to the blind-ended bore, the screw thread on the knob and the screw

- thread on the bored bolt being
threadably engaged with each other when
the knob is in place on the bolt,
- (7) a compression spring located inside the blind-ended bore and having a first end abutting the knob adjacent to the blind-ended bore and having a second end located inside the bore defined through the bored nut when the knob is in place on the bored bolt and the spring is in place in the blind-ended bore, and
- (8) a scribe element movably positioned inside the bore of the bored bolt when the scribe element is in place, the scribe element including a proximal end in abutting contact with the second end of the spring when the scribe element is in place in the bore of the bored bolt and a distal end which is located adjacent to the head of the bored bolt when the scribe element is in place, the scribe element moving between a first position in which the distal end of the scribe element is located inside the bore of the bored bolt and a second position in which the distal end of the scribe element is located outside the

bore of the bored bolt, the spring biasing the scribe element toward the second position, the distal end of the scribe element being adapted to contact the outer surface of the second conduit while the pivot unit is in contact with the first conduit.

2. The conduit marking scribe as described in claim 1 further including a ruler adapted to contact the first end of said body element.
3. A conduit marking scribe comprising:
 - a) a body;
 - b) a pivot unit on one end of said body, said pivot unit including a wheel which is adapted to contact the outer surface of a first conduit which will be engaged with a second conduit after the second conduit has been cut; and
 - c) a scribe unit movably mounted on said body, said scribe unit including
 - (1) a scribe element which includes a distal end and which is movable between a first position having the distal end located inside said scribe unit and a second position having the

distal end located outside said scribe unit with the distal end with the distal end in position to contact the outer surface of the second conduit, and

- (2) a biasing element which biases the scribe element toward the second position.

4. A method of scribing a conduit comprising:

- a) providing a conduit marking scribe comprising a body; a pivot unit on one end of said body, said pivot unit including a wheel which is adapted to contact the outer surface of a first conduit which will be engaged with a second conduit after the second conduit has been cut; and a scribe unit movably mounted on said body, said scribe unit including a scribe element which includes a distal end and which is movable between a first position having the distal end located inside said scribe unit and a second position having the distal end located outside said scribe unit with the distal end with the distal end in position to contact the outer surface of the second conduit, and a biasing element which biases the scribe element toward the second position;

- b) temporarily attaching one end of the second conduit to the outer surface of the first conduit at a location where the second conduit will be joined to the first conduit;
- c) contacting the wheel against the outer surface of the first conduit;
- d) locating the scribe unit against the outer surface of the second conduit;
- e) contacting the distal end of the scribe unit against the outer surface of the first conduit;
- f) marking the second conduit by moving the scribe unit with respect to the first conduit and with respect to the second conduit so the distal end of the scribe unit engages and marks the second conduit while the wheel of the pivot unit remains in contact with the outer surface of the first conduit and moves over the outer surface of the first conduit.

5. The method as described in claim 4 further including steps of joining the first conduit to the second conduit by cutting the second conduit along the mark made on the second conduit; and joining the second conduit to the first conduit adjacent to the cut made in the second conduit.

6. A method of scribing a conduit comprising

a) providing a conduit marking scribe having

(1) a body element which includes

(A) a first end,

(B) a second end,

(C) a longitudinal axis extending between the first end of said body element and the second end of said body element,

(D) a first side,

(E) a second side,

(F) a transverse axis extending between the first side of said body element and the second side of said body element,

(G) a first surface,

(H) a second surface,

(I) a thickness dimension extending between the first surface of said body element

and the second surface of said body element, and

(J) a slot defined in said body element and extending from adjacent to the first end of said body element to adjacent to the second end of said body element and extending from the first surface of said body element to the second surface of said body element;

(2) a pivot unit on the second end of said body element, said pivot unit being adapted to contact and move along the outer surface of a first conduit which will be engaged with a second conduit after the second conduit has been cut to accommodate the first conduit, said pivot unit including

(A) a mounting ear on the second end of said body element,

(B) a wheel rotatably mounted on the ear to rotate in a plane containing the transverse axis of said body element, the wheel having an outer circumference and rotating on the mounting ear clockwise and counterclockwise with

- respect to the first and second sides of
said body element,
- (C) knurling on the outer circumference of
the wheel, and
 - (D) a center hole defined through the wheel
and through the mounting ear; and
- (3) a scribe unit movably mounted on said body
element, said scribe unit including
- (A) a frame having a first surface and a
second surface and a thickness dimension
that extends in the direction of the
thickness dimension of said body element
when the first surface of the frame is
positioned to abut the second surface of
said body element, the frame having a
hole defined therethrough with the hole
being oriented to extend in the
direction of the thickness dimension of
said body element when the first surface
of the frame is in contact with the
second surface of said body element,
 - (B) a counterbore defined in the second
surface of the frame adjacent to the
hole defined through the frame,

(C) a bored bolt including

- (I) a head end located in the counterbore defined in the second surface of the frame when the bored bolt is in place on the frame,
- (ii) a bolt body which extends from the head of the bored bolt through the hole defined through the frame to extend through the slot defined in said body element when said scribe unit is in place mounted on said body element,
- (iii) a second end,
- (iv) an outer surface on the bored bolt body,
- (v) a bore defined in the bored bolt body and which extends from the head of the bored bolt to the second end of the bored bolt, the bored bolt having an inner surface located adjacent to the bore defined in the bored bolt body, and
- (vi) a screw thread defined in the outer surface of the bored bolt body,

(D) an annular washer having a first surface and a second surface, the second surface of the annular washer being located to contact the first surface of the frame when the annular washer is in place on the frame, the annular washer having a hole defined therethrough, the hole defined through the annular washer extending from the first surface of the washer to the second surface of the washer and is aligned with the hole defined through the frame when the washer is in place,

(E) an annular nut having a first surface and a second surface, the second surface of the annular nut contacting the first surface of the annular washer when the washer and the nut are in place, the nut having a hole defined therethrough from the first surface of the nut to the second surface of the nut, the hole defined through the nut being aligned with the hole defined through the washer and with the hole defined through the

frame when the nut and the washer are in place on the frame, the nut having a screw thread defined thereon adjacent to the hole defined through the nut, the screw thread on the nut threadably engaging the screw thread on the bored bolt when the bored bolt and the nut are in place on the frame,

(F) a bored knob, the bored knob including

(I) a body,

(ii) a first end on the body of the knob,

(iii) a second end on the body of the knob, the first end of the bored knob being spaced apart from the first surface of the nut to define a gap between the bored knob and the nut when the knob and the nut are in place on the bored bolt, said body element being interposed between the nut and the knob when said scribe unit is in place on said body element with the first surface of said body element in

contact with the first end of the knob and the second surface of said body element in contact with the first surface of the nut whereby said scribe unit is held in place on said body element through frictional engagement with said body element,

(iv) a blind-ended bore defined in the bored knob, the blind-ended bore extending from the first end of the knob toward the second end of the knob, the blind-ended bore being aligned with the hole defined through the nut when the knob and the nut are in place on the bored bolt, and

(v) a screw thread defined on the bored knob adjacent to the blind-ended bore, the screw thread on the knob and the screw thread on the bored bolt being threadably engaged with each other when the knob is in place on the bolt,

- (G) a compression spring located inside the blind-ended bore and having a first end abutting the knob adjacent to the blind-ended bore and having a second end located inside the bore defined through the bored nut when the knob is in place on the bored bolt and the spring is in place in the blind-ended bore, and
- (H) a scribe element movably positioned inside the bore of the bored bolt when the scribe element is in place, the scribe element including a proximal end in abutting contact with the second end of the spring when the scribe element is in place in the bore of the bored bolt and a distal end which is located adjacent to the head of the bored bolt when the scribe element is in place, the scribe element moving between a first position in which the distal end of the scribe element is located inside the bore of the bored bolt and a second position in which the distal end of the scribe element is located outside the

bore of the bored bolt, the spring biasing the scribe element toward the second position, the distal end of the scribe element being adapted to contact the outer surface of the second conduit while the pivot unit is in contact with the first conduit;

- b) temporarily attaching one end of the second conduit to the outer surface of the first conduit at a location where the second conduit will be joined to the first conduit;
- c) contacting the wheel against the outer surface of the first conduit;
- d) locating the scribe unit against the outer surface of the second conduit;
- e) contacting the distal end of the scribe unit against the outer surface of the first conduit;
and
- f) marking the second conduit by moving the scribe unit with respect to the first conduit and with respect to the second conduit so the distal end of the scribe unit engages and marks the second conduit while the wheel of the pivot unit remains in contact with the outer surface of the first

conduit and moves over the outer surface of the first conduit.

7. The method as described in claim 6 further including steps of joining the first conduit to the second conduit by cutting the second conduit along the mark made on the second conduit; and joining the second conduit to the first conduit adjacent to the cut made in the second conduit.